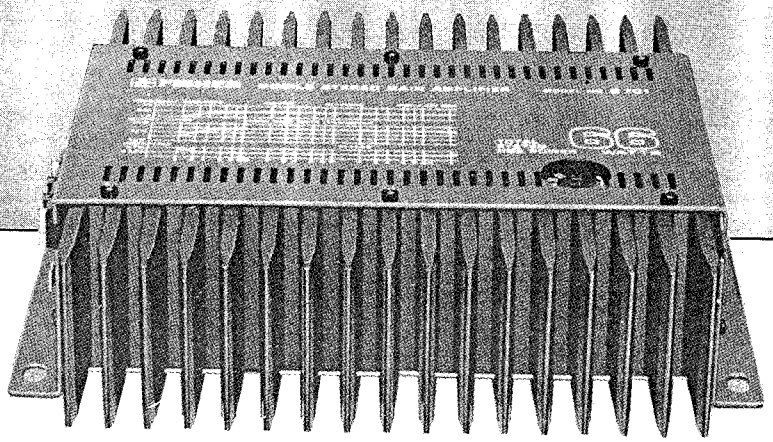
SERVICE MANUAL

FISHER

B-701

CAR STEREO MAIN AMPLIFIER



The first name in high fidelity

SPECIFICATIONS

Ootput Power (RMS)	2×33 Watts
THD (Nomnal Output)	≦ 1.0%
THD (−3 dB)	0.08%
Frequency Response (50 mW)	20 Hz～30 kHz
Power Band Width	20 Hz～20 kHz
Input Impedance	680 ohms
Min. Load Impedance	4 ohms
S/N Ratio (Nominal Output)	70 dB
S/N Ratio (50mW Output)	60 dB
DC Power Supply (Battery Voltage)	11～15 Volts
Internal DC Power Supply Voltage	±24V
Dimensions	200×65×230 mm (W×H×D)
Weight	2.2 kg

Because its products are subject to continuous improvement, Fisher Corporation reserves the right to modify product designs and specifications without notice and without incurring any obligation.

ALIGNMENT PROCEDURES

General

Test Conditions

Signal generator output;

Modulation frequency 400 Hz

Modulation percentage 30 %

Signal level just high enough to provide meter deflection.

Signal application;

Antenna receptacle thru the dummy antenna.

Output meter connection;

Across a speaker or a dummy load (4 ohms).

Setting of radio controls;

Volume control at maximum response.

Tone control at high note emphasis.

Power supply 14 V

Alignment of Protection Circuit

1. Set the input level at 700mV per channel.
2. First of all, conferm to get the voltage of "0" on IC701 (pin No.8) by turning the variable control (R703) counter-clockwise and adjust it at 4.8V.

PARTS LIST

Key No.	Ref. No.	Part No.	Description	Q'ty
PACKAGE PARTS				
		R-4075338-1	Individual carton	1
		R-4173005A	Styro-foam cushion, Right & Left	2
		R-4776956	Instruction book	1
		R-357363	Polyethylene bag	1
		R-4777000	Guarantee card	1
		R-4773695B	Guarantee card	1
ACCESSORY				
		R-A79772	Mounting hardware assembly	1
		R-S17472	Fuse, 12A 125V	(1)
			Tap. Screw, Pan Hd., 6x16	(4)
			Tap. Screw, Pan Hd., 5x16	(1)
			Flat Washer, Metal, 5	(1)
		R-357527	Polyethylene bag, 100x100	(1)

Key No.	Ref. No.	Part No.	Description	Q'ty
CABINET				
1		R-1274453	Top lid	1
2		R-2673642	Heat sink	1
3		R-2673643	Heat sink	1
4		R-2673641	Heat sink	1
		R-4777015	Rating label	1
		R-4777016	Caution label	1
		R-437428A	Cover, Top lid	1
		R-437541	Cover, Top lid	1
5		R-2672790A	Heat sink	1
6		R-127375-2	Bracket, Cord	2
7		R-1272860	Terminal	1
		R-437542	Cover, Top lid	1
		R-4174717	Fixer, Fuse	1
			Tap. Screw, Pan Hd., 3x5 B-tight Top lid	10
			Tap. Screw, Pan Hd., 3x10 B-tight Heat sink-Heat sink	4

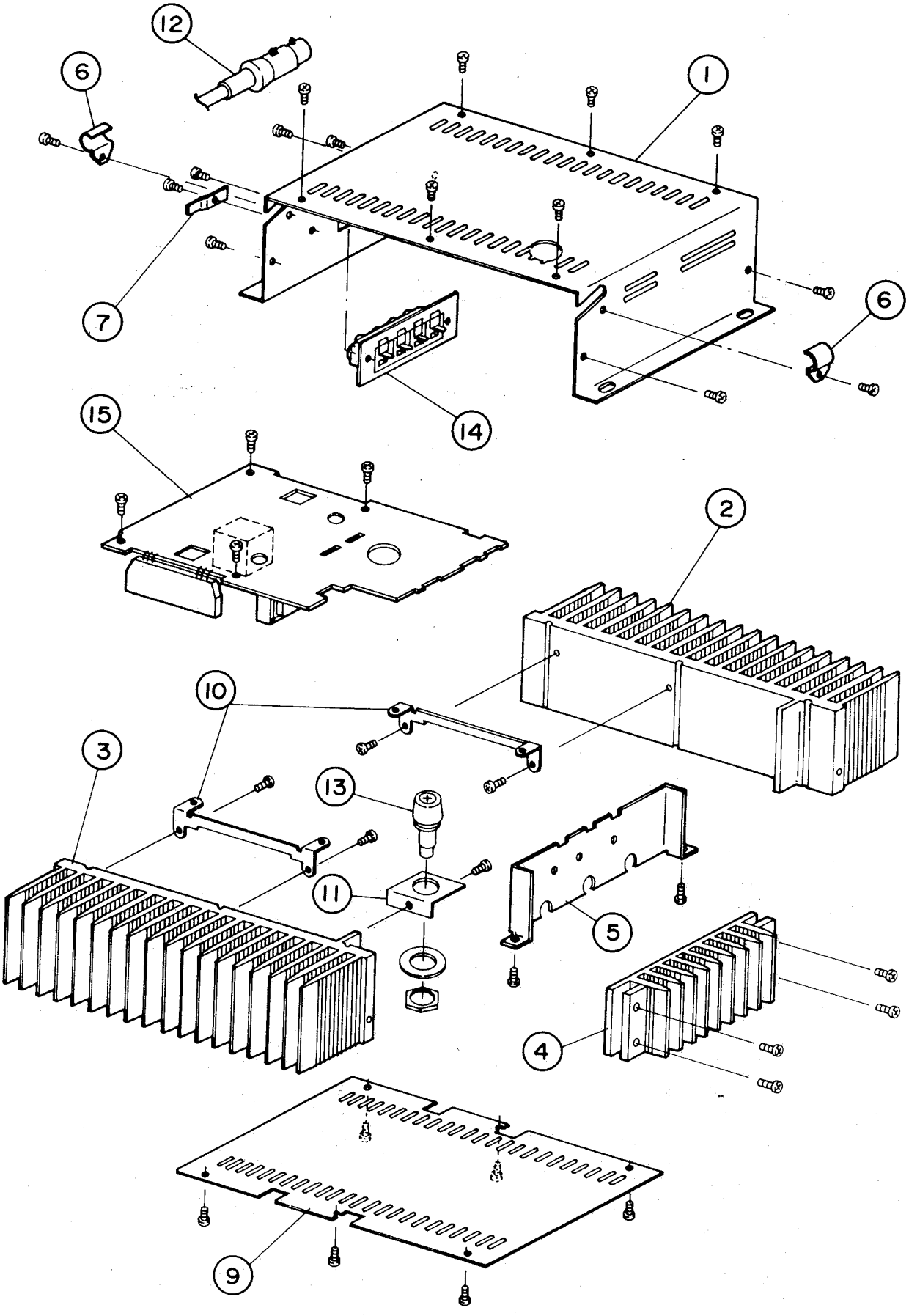
NOTES : 1. Part orders must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and/or resistors must be multiple of 10 pcs.

PARTS LIST

Key No.	Ref. No.	Part No.	Description	Q'ty
			Screw, Bind Hd., 3x5 Terminal	2
			Tap. Screw, Pan Hd., 3x5 B-tight Terminal	1
			Screw, Bind Hd., 3x8 IC	2
			Nut, Hex Hd., 3 IC	2
			Screw, Bind Hd., 3x6 IC	4
			Tap. Screw, Washer Hd., 3x12 IC	4
			Screw, Bind Hd., 3x6 IC	1
			Thrust washer, Metal, 3x5.4x0.5 Top lid	12
CHASSIS				
9		R-1272890-1A	Bottom lid	1
10		R-1271158B	Bracket, P. C. B.	2
11		R-1272891A	Bracket, Fuse	1
		R-437413	Felt	2
			Tap. Screw, Pan Hd., 3x5 B-tight Bracket, Fuse	1
			Tap. Screw, Pan Hd., 3x6 B-tight Bottom lid	6
			Tap. Screw, Pan Hd., 3x5 B-tight P. C. B.-Bracket	4
CHASSIS ELECTRICAL				
12		R-S37470	Cord, Input	1
13		R-S17497	Fuse holder	1
		R-S17472	Fuse, 12A 125V	1
		R-4470535	Insulator	3
14		R-S17470	Terminal plate, Out	1
		R-S37327-1	Cord, 750mm, Brown	1
SEMICONDUCTORS				
	IC1, 101		Integrated circuit, STK-0029N	2
AMP. P.C.B. ASSEMBLY				
15		R-A79773	Printed circuit board assembly, AMP.	1
		R-247505-2	Pin, 15mm	1
		R-S47671	Relay	1
	L51	R-W67004	Choke coil	1
	T51	R-W770020	Power transformer	1
	R703	R-R110706	Preset resistor, 2k	1
SEMICONDUCTORS				
	IC51		Integrated circuit, NJM4558	1
	IC701		Integrated circuit, BA335	1
	IC702		Integrated circuit, HA12002	1
	Q1, 101		Transistor, 2SA608	2
	Q2, 3, 102, 103		Transistor, 2SA929	4
	Q4, 5, 104, 105		Transistor, 2SC1571	4
	Q6, 106		Transistor, 2SC1017	2
	Q7, 107		Transistor, 2SC1363	2
	Q51, 52, 58		Transistor, 2SA608	3
	Q53, 54		Transistor, 2SC536 or, 2SC732	2
	Q55, 56, 61, 62		Transistor, 2SC2491	4
	Q57		Transistor, 2SD612	1
	Q701		Transistor, 2SC536	1
	D1, 2, 101, 102		Diode, DS442 VG1	4
	D51, 53, 55, 58, 63, 64, 704		Diode, GMA01-FY1	7
	D52		Zener diode, XZ-068	1
	D54		Zener diode, WZ-350	1
	D56, 57		Zener diode, GZA22U	2
	D59		Diode, ESAC25-02CA	1
	D60		Diode, ESAC25-02NA	1
	D701, 702		Diode, 1S188 FM	2
	D703		Zener diode, GZA9.1L	1
	D65, 705		Diode, SM-1A-02 LFD3	2
	TH1		Posistor, PTH478A01BE	1
CAPACITORS				
	C2, 102		Electrolytic, 22mfd/10V MS	2
	C6, 106		Electrolytic, 100mfd/6.3V MS	2
	C8, 108, 704, 705		Electrolytic, 100mfd/10V MS	4
	C4, 104, 5, 105		Electrolytic, 220mfd/35V	4
	C51, 60		Electrolytic, 47mfd/16V MS	2
	C703		Electrolytic, 4.7mfd/35V	1
	C706, 707		Electrolytic, 10mfd/16V MS	2
	C701		Electrolytic, 2.2mfd/50V MS	1
	C702		Electrolytic, 3.3mfd/16V Tantalum	1
	C59, 61, 63		Electrolytic, 2200mfd/35V	3
	C53, 54		Electrolytic, 3300mfd/35V	2
	C64		Electrolytic, 100mfd/16V MS	1
	C3, 103		SBL ceramic, 0.012mfd, ±20%, 25V	2
	C7, 107		Ceramic, 33pF, ±10%, 50V, SL	2
	C9, 109		Ceramic, 51pF, ±10%, 50V, SL	2
	C10, 110, 52		Mylar, 0.047mfd, ±20%, 50V	2
	C708		Mylar, 0.01mfd, ±20%, 50V	1
	C91, 92, 93		Metalized polyester film, 0.22mfd, ±5%, 50V	3
RESISTORS				
	(Resistors are of carbon type, ±5% allowance and $\frac{1}{4}$W unless otherwise noted.)			
	R702		180 k ohm	1
	R704		220 k ohm	1
	R701, 715, 716		47 k ohm	3
	R52, 68, 706		10 k ohm	3
	R54, 55, 76, 77		27 k ohm	4
	R57		2.7 k ohm	1
	R58		12 k ohm	1
	R62		150 k ohm	1
	R64		100 k ohm	1
	R65, 707		2.2 k ohm	2
	R66, 67		8.2 k ohm	2
	R69, 70, 712		4.7 k ohm	3
	R78, 709		22 k ohm	2
	R80		270 ohm	1
	R2, 102		680 ohm	2
	R3, 103, 708		56 k ohm	3
	R4, 104		330 ohm	2
	R5, 105, 6, 106		56 ohm	4
	R7, 107		560 ohm	2
	R9, 109, 59		15 k ohm	3
	R10, 110, 51, 53, 60, 61, 75, 95, 705, 710, 717		1 k ohm	11
	R11, 111		100 ohm	2
	R12, 112		47 ohm	2
	R8, 108, 63, 74		33 k ohm	4
	R13, 113, 14, 114		Metal oxide film, 100ohm, ±5%, 1W	4
	R15, 115, 16, 116		Metal oxide film, 0.22ohm, ±5%, 2W	4
	R17, 117		Metal oxide film, 4.7ohm, ±5%, 1W	2
	R93		Metal oxide film, 270ohm, ±5%, 1W	1
	R711		Metal oxide film, 120ohm, ±5%, 1W	1
	R72, 73, 79, 91, 92		Metal oxide film, 150ohm, ±5%, 1W	5

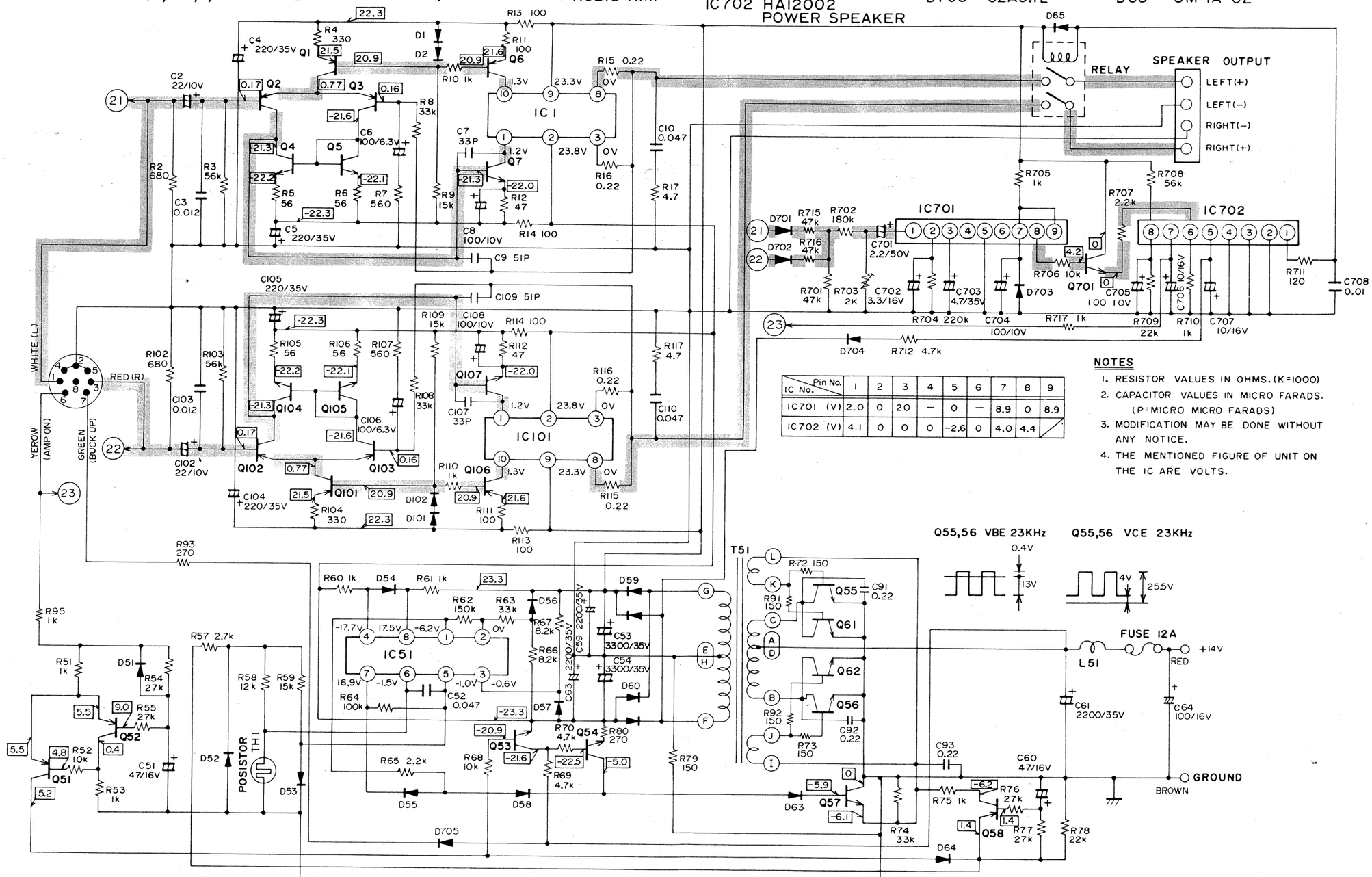
NOTES : 1. Part orders must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and/or resistors must be multiple of 10 pcs.

EXPLODED VIEW



SCHEMATIC DIAGRAM

IC1,101 STK0029 POWER AMP
Q1,101 2SA608 AUDIO AMP
Q2,102,3,103 2SA929 AUDIO AMP
Q4,104,5,105 2SC1571 AUDIO AMP
Q6,106 2SA1017 AUDIO AMP
Q7,107 2SC2363 AUDIO AMP
D1,101,2,102 DS442
IC701 BA335 POWER SPEAKER
IC702 HA12002 POWER SPEAKER
Q701 2SC536 RELAY DRIVE
D701,702 1S188
D703 GZA9.1L
D704 GMA01
D65 SM-1A-02



IC No. \ Pin No.	1	2	3	4	5	6	7	8	9
IC701 (V)	2.0	0	20	—	0	—	8.9	0	8.9
IC702 (V)	4.1	0	0	0	-2.6	0	4.0	4.4	

NOTES

1. RESISTOR VALUES IN OHMS. (K=1000)
2. CAPACITOR VALUES IN MICRO FARADS. (P=MICRO MICRO FARADS)
3. MODIFICATION MAY BE DONE WITHOUT ANY NOTICE.
4. THE MENTIONED FIGURE OF UNIT ON THE IC ARE VOLTS.

Q55,56 VBE 23KHz

Q55,56 VCE 23KHz

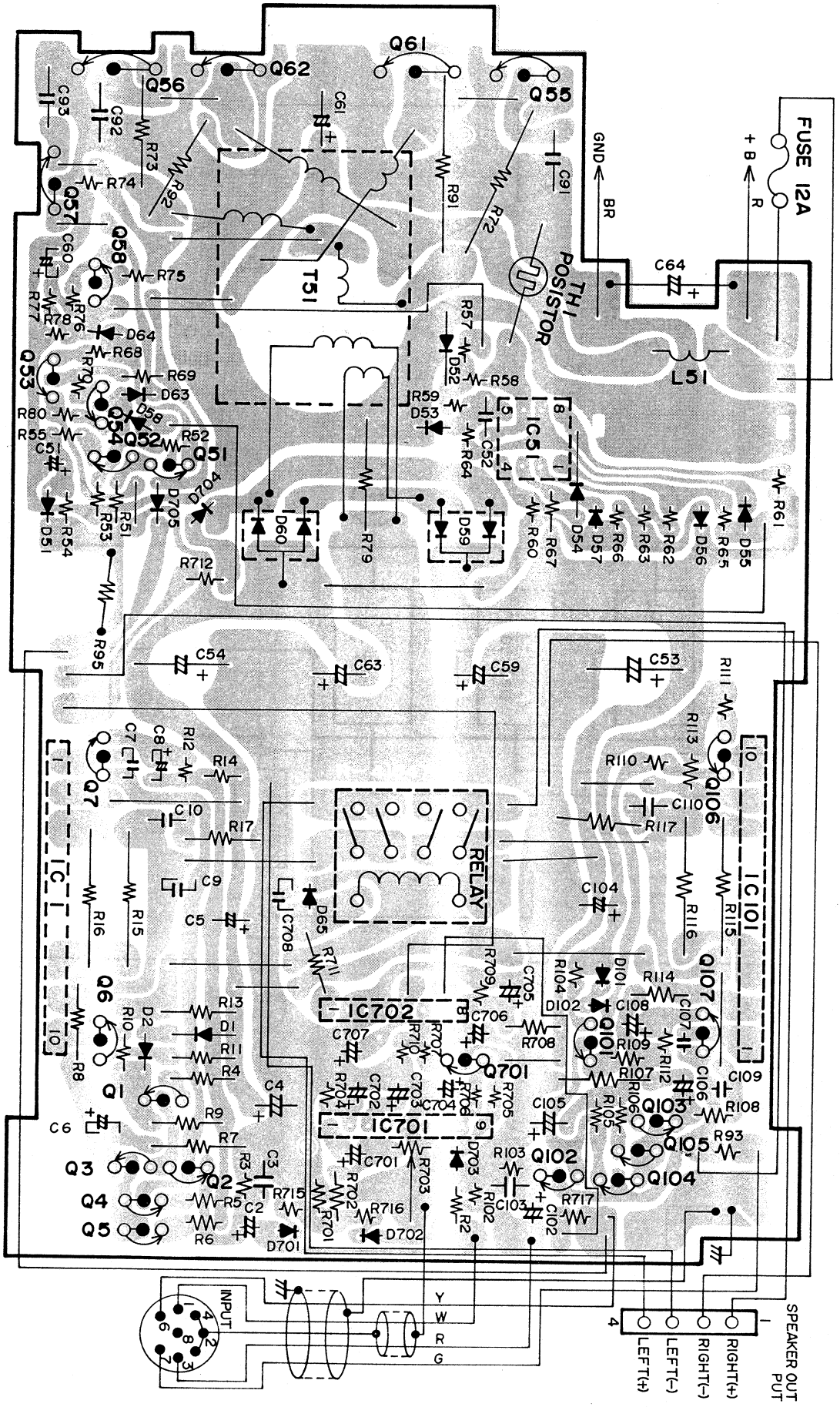
Q51,52 2SA608 OSC START
D52 XZ068
D54 WZ350

IC51 NJM4558 VOLTAGE REGULATOR
Q53,54 2SC536 OSC STOP
D51,53,55,58,63,64 GMA01
D705 SM-1A-02

Q55,56 2SC2491 SWITCHING
Q57 2SD612 SWITCHING DRIVE
D56,57 GZA22U
Q61,62 2SC2491

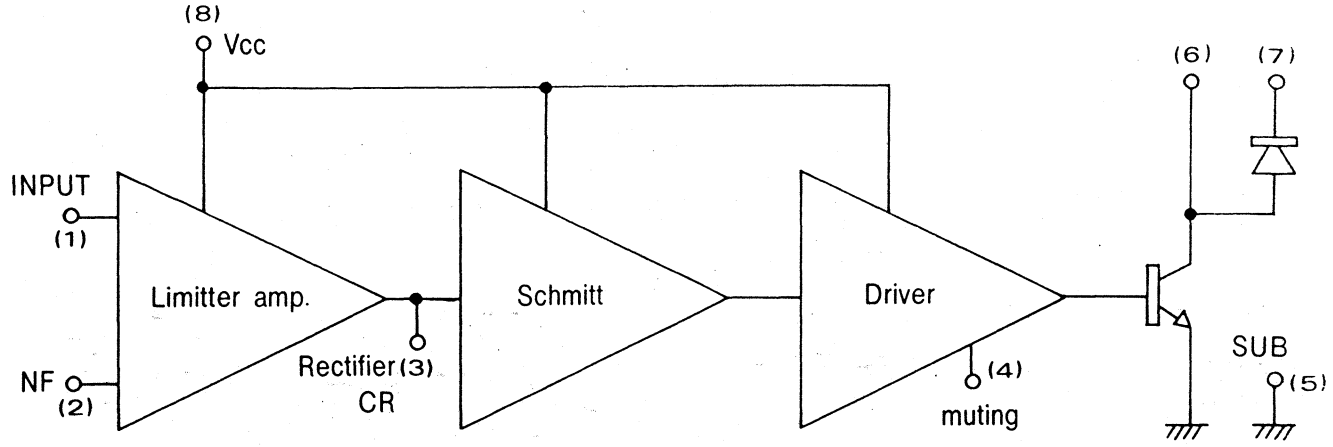
Q58 2SA608 OSC START
D59 SAC25-02CA
D60 SAC25-02NA

WIRING DIAGRAM

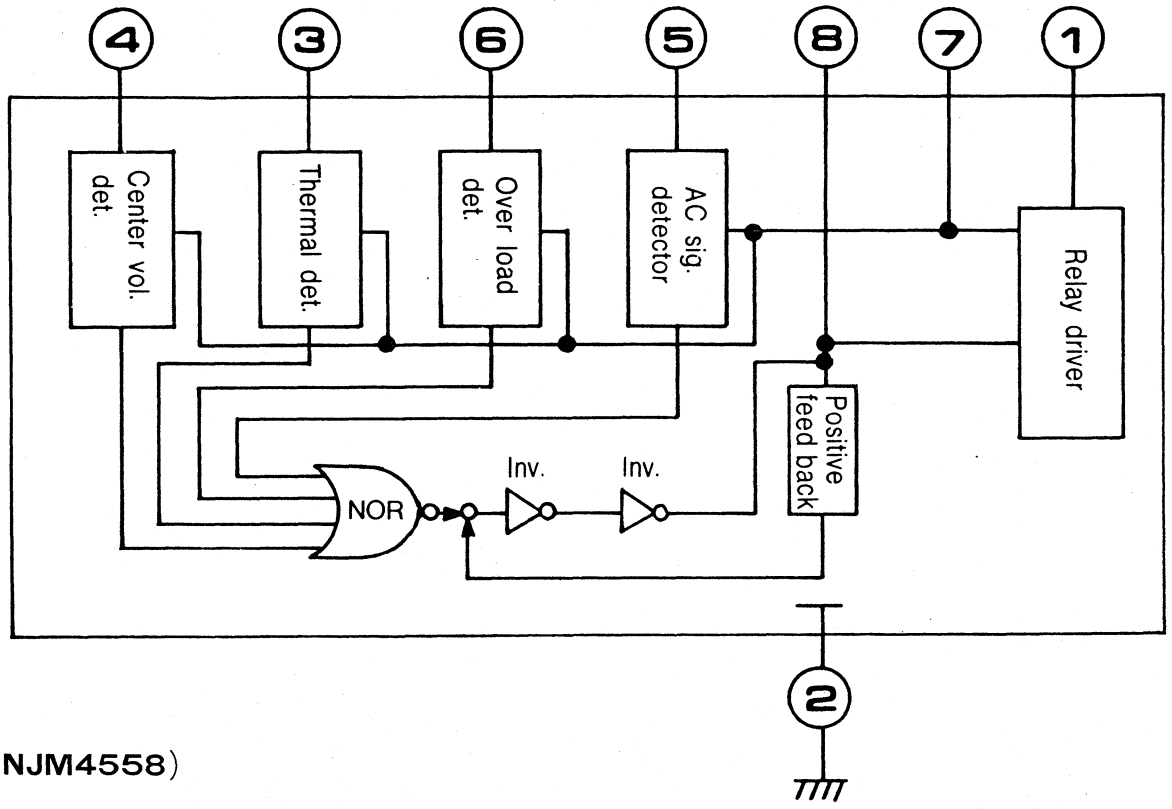


IC FUNCTIONS

IC701 (BA335)



IC702 (HA12002)



IC51 (NJM4558)